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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,570	10/24/2003	Shigeru Nemoto	244406US2	6947

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EXAMINER	
CWERN, JONATHAN	

ART UNIT	PAPER NUMBER
3737	

NOTIFICATION DATE	DELIVERY MODE
05/17/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/691,570	NEMOTO, SHIGERU	
	Examiner	Art Unit	
	JONATHAN G. CWERN	3737	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 May 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *40,41 and 45-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *40,41 and 45-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 40-41 and 45-49 are rejected under 35 U.S.C. 103(a) as being unpatentable over Uber, III et al. (US 5840026) in view of Duchon et al. (US 2003/0018252), Cherek et al. (US 2004/0081341), and Dahlin et al. (US 2004/0078215).

Uber et al. disclose a patient specific dosing contrast delivery system. The system first allows for a user to enter patient specific data such as the patient's size and weight. This data can also be downloaded from an external database. The system then determines the appropriate concentration of the contrast media, as well as the appropriate flow rate, volume, time delay, etc. The system also takes into account imaging parameters such as the section of the body being imaged, and can automatically adjust based on a desired image quality or sensed amount of concentration in the body. The concentration of contrast agent can also be adjusted by adding in a diluent (column 5, line 20-column 6, line 52; column 8, lines 1-7; column 12, lines 5-26). In general, the system allows for control over many typical imaging and contrast delivery parameters, and allows for both automated delivery using predetermined values and also a wide range of user customization if desired. Table 1

(column 8) shows a number of parameters, including length of scanning and duration of injection. Thus these parameters may be predetermined or selected by the user. Thus, by using a predetermined length of scanning or duration of the injection, the system would adjust other values (such as flow rate or injection rate) based on the patient's specific data (such as size or weight) in order to achieve the desired scan time or duration of the injection. Different doctors may also have different desired preferences for these parameters (column 13, lines 30-50), illustrating the amount of customization the system allows for. Thus each doctor may have a different desired length of scanning or duration of the injection which they wish to use, and the system can load this data and adjust other parameters such as injection rate to achieve these goals taking into account the patient's specific data such as size or weight. Thus a user can select (or the system can automatically load) the predetermined injection time to be unchanged and the system will adjust the injection rate based on the user's weight. One of ordinary skill in the art would recognize that there are wide range of desired parameters which the system can account for, and use preset values or allow for user customization based on the user's design choice. It would be obvious to one of ordinary skill in the art to customize any of these parameters depending on the specific patient being diagnosed and the user's preferences. Uber et al. fail to show a touch screen user interface.

Duchon et al. disclose an angiographic injector system. Duchon et al. teach a touch screen that is used to select injection parameters ([0022]). Duchon et al. also teach injecting saline ([0074]).

Cherek et al. disclose a method for positioning a patient. Cherek et al. teach a touch screen which displays a patient's body, and scans an area of the patient's body based on which area of the body is selected ([0010]).

Dahlin et al. disclose a system for documenting medical findings. Dahlin et al. teach a touch screen user interface which can display a region of the body, and when an area is selected, can further zoom in to display that area of the body in more detail ([0086]).

It would have been obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system of Uber et al. to use a touch screen as taught by Duchon et al., as this will provide the user with a simple control over the operation of the system. A variety of different user interfaces could be provided on the touch screen for controlling various portions of the operation, as is well known in the art. Cherek et al. and Dahlin et al. provide specific examples of such user interfaces which could be employed in the combined system of Uber et al. and Duchon et al. Providing an image of the body for the user to select the desired area being imaged will provide a simple and intuitive way for the user to select the desired area.

Response to Arguments

Applicant's arguments filed 5/4/11 have been fully considered but they are not persuasive.

The examiner believes that most issues have been addressed in the examiner's previous response to arguments in the 11/17/10 office action, and the examiner maintains these positions:

In general, the system allows for control over many typical imaging and contrast delivery parameters, and allows for both automated delivery using predetermined values and also a wide range of user customization if desired. Table 1 (column 8) shows a number of parameters, including length of scanning and duration of injection. Thus these parameters may be predetermined or selected by the user. Thus, by using a predetermined length of scanning or duration of the injection, the system would adjust other values (such as flow rate or injection rate) based on the patient's specific data (such as size or weight) in order to achieve the desired scan time or duration of the injection. Different doctors may also have different desired preferences for these parameters (column 13, lines 30-50), illustrating the amount of customization the system allows for. Thus each doctor may have a different desired length of scanning or duration of the injection which they wish to use, and the system can load this data and adjust other parameters such as injection rate to achieve these goals taking into account the patient's specific data such as size or weight. Thus a user can select (or the system can automatically load) the predetermined injection time to be unchanged and the system will adjust the injection rate based on the user's weight. One of ordinary skill in the art would recognize that there are wide range of desired parameters which the system can account for, and use preset values or allow for user customization based on the user's design choice. It would be obvious to one of ordinary skill in the art to customize any of these parameters depending on the specific patient being diagnosed and the user's preferences.

Furthermore, in regards to applicant's argument that Uber et al. do not disclose that the system will "automatically load a predetermined injection time", examiner respectfully disagrees. Column 7, lines 47-55 describe an embodiment in which a user enters the patient specific data, and the volume, concentration, and injection parameters are displayed for the operator. That is, the user merely enters data about the patient (weight and area to be scanned for example), and the system calculates everything else necessary to perform the injection and scanning. Table 1 for example lists some of these injection parameters, the duration of the injection being one parameter (under the intra-arterial section, center column, second line from the bottom). Therefore, a user enters data about the patient, and the system automatically determines the appropriate duration of the injection (predetermined injection time).

In regards to applicant's argument that Uber et al. teaches away from a predetermined injection time, examiner respectfully disagrees. Any processing that may take place before the procedure begins can be considered a part of creating the "predetermined injection time".

Furthermore, this section is referring to collecting data from numerous patients. Each individual patient still gets a unique set of injection parameters that are preset for the patient before the procedure begins. The adjustment referred to occurs before the injection begins. Indeed the claim limitation refers to "unchanged for each...injection of said contrast medium into a subject". Rather than teach away, this section further supports the examiner's position, as the scan will be automatically determined for a patient. Furthermore, as this section does not refer to adjusting during the scan, but

rather before it, this section also does not indicate that the calculated parameters are not fixed or constant. Indeed applicant's claim 45 also refers to modifying an injection time based on an imaging item.

In regards to applicant's arguments regarding "design choice", it should first be noted that Uber et al. do show all of the claim limitations regarding these features. The design choice statement was made by the examiner to aid in advancing prosecution, by provide a further illustration that variations to these injection parameters is known. For example the paragraph bridging column 7-8 of Uber et al. indicates that with some experimentation the best results for a given system can be determined. Also, applicant states that "the fixed injection time permits the timing of the fluoroscopic image capture to be invariably set for the maximum concentration". However, this is no more than a predictable result of fixing the injection time, and as already discussed Uber et al. do not teach away from fixing the injection time.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JONATHAN G. CWERN whose telephone number is (571)270-1560. The examiner can normally be reached on Monday through Friday 9:30AM - 6:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Casler can be reached on 571-272-4956. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jonathan G Cwern/
Examiner, Art Unit 3737

/BRIAN CASLER/
Supervisory Patent Examiner, Art Unit 3737